



# Digitalized Instructional Materials in Creative Writing based on Technological Pedagogical Content Knowledge

Jared P. Manalastas

Philippine Science High School-Central Luzon Campus & New Era University, Philippines

**Abstract**— The main objective of the study was essentially focused on determining the effective ways in teaching creative writing among the Grade 11 Humanities and Social Sciences (HUMSS) students based on the Technological Pedagogical Content Knowledge (TPACK) in utilizing and developing digitalized instructional materials. A Quasi-Experimental research design was specifically utilized for one group shot. The creative writing teacher employed the digitalized resources in teaching creative writing covered for the semester after administering pretest to improve the writing skills of the students. Data collection was limited to pretest and posttest scores of the subjects using Paired T-test dependent among the students taking up the creative writing subject. This research concluded that there is significant difference in teaching creative writing of HUMSS students using digitalized materials. Using various tools available online and electronic resources can help and enrich students' creative writing abilities towards independent learning. Thus, writing opportunities can take place everywhere both in the classroom and at home.

**Keywords**— creative writing, digitalized resources, instructional materials, HUMSS students, TPACK framework.

## I. INTRODUCTION

Creative or imaginative writing is any writing in which the writer's thoughts and feelings are written in an artistic, unique, and poetic way (Gasulas et al., 2017). The primary purpose of being creative is to entertain and educate. Its content is imaginative, metaphoric, and symbolic by nature. Also it aims to share human experiences, and it does so by expressing feelings or thoughts that are borne out of the imagination in different genres such as poetry, fiction, plays, and personal essays.

Imagination is the main feature in creative writing that is in contrast to analytic or pragmatic forms of technical or academic writing. Hence, Humanities and Social Sciences (HUMSS) students under Academic Track need to be equipped with necessary writing skills to compose and create well-written outputs. Language and tone must be evocative, artistic and figurative to capture the underlying theme of the written work. The creative writing class is perhaps one of the best ways to see the progress and development of students in writing proficiency to meet the needs of whatever writing tasks they are assigned (Murcia, 2006).

In the Philippines, Creative Writing has been a part of the Enhanced Basic Education Curriculum in the Senior High School Program of the Academic Track. It is one of the specialized subjects that should be taught to the students who are taking up Humanities and Social Sciences (HUMSS) strand under the Academic Track. Students are expected to understand and employ the rudiments and fundamental techniques of writing fiction, poetry, and drama. In doing this, teachers should also help students to come to this same realization and learning outcomes.

Creative writing is both an art and discipline (Nery, 2017). It is an art of self-expression that allows the writer to process experience and imagination to communicative thoughts and feelings about the human experience in a manner that is enjoyable, engaging, and enlightening. Learning to write is one of the most highly valued outcomes of education. Moreover, it is also a discipline that can be learned and mastered with constant practice. Just like any abilities, there are various strategies and techniques that can be employed to hone the creative writing skills of the students especially with the integration of technology in writing process.

In the contemporary world, there is a great need and demand for people to express their thoughts and ideas through oral and written forms. Using the social media and communicating through the means of written language has become a common activity of millions of people nowadays. The importance to communicate through writing is therefore a need among the senior high school students. Students produce written texts that are both culturally and socially bounded in a particular language. Generally speaking, writing becomes the primary means by which students display their knowledge, skills and competence in many academic subjects.

As stated by Temizkhan (2010), it is possible to reach students' potential and inner worlds through creative writing activities without appropriate and relevant intervention. It would be easier for them to express their feelings and opinions anytime, anywhere, and to anyone freely, without any pressure or fear of being judged and criticized. Teachers must show sympathy toward their students by guiding them effectively. Developing students' creativity in writing may require various methods and strategies to address the different learning styles and characters of each of their students. Furthermore, some studies revealed that using imaginative world and technology in the creative writing process, students will gain the target outcomes and write with pleasure during their creative writing practices and outputs (Ataman, 2008).

## II. STATEMENT OF THE PROBLEM

The main objective of the study is to determine the effective ways in teaching creative writing among the Senior High School students of Montessori De Sagrada Familia under the Humanities and Social Sciences (HUMSS) Academic Track as basis in utilizing and developing digitalized instructional materials.

Specifically, this study sought to answer the following questions:

1. What digitalized materials can be adapted and packaged for instruction in teaching creative writing?
2. How may the packaged instructional materials be validated by language experts in terms of the following:
  - 2.1 content quality;
  - 2.2 instructional quality and;
  - 2.3 technical quality ?

3. How significant is the difference between the pre-test and post-test results performance of the HUMSS students using the packaged instructional materials?
4. How may the findings of the study establish relationship and probe the TPACK in language learning?

### Null Hypothesis

There is no significant difference between the pre-test and post-test scores of the selected group of students in terms of *imagery*, *figures of speech* and *diction*.

### Theoretical Framework

Technology plays an important role in teaching and learning processes. It is used to deliver effective classroom instructions to the make students more engaged and interested with the lessons and concepts that are being introduced to. Transformative and meaningful learning would take place through a purposeful interplay of ideas, knowledge, and technology in the classroom. Technologies would be most certainly essential in the support of new teaching and learning approaches.

This study is anchored on Technological Pedagogical Content Knowledge (TPACK) theoretical framework which is being utilized to show how effective and useful to incorporate technology in teaching creative writing in the classroom. TPACK framework builds on Lee Shulman's (1986, 1987) descriptions of Pedagogical Content Knowledge (PCK). Given this comparatively new understanding of the multifaceted, interdependent and nuanced knowledge required of teachers for curriculum-based technology integration. In this model, there are three core components of teachers' knowledge: content, pedagogy, and technology. The TPACK framework adheres to assist better teaching methodologies for developing and implementing how technology-related to professional knowledge (Mishra & Koehler, 2006; Koehler & Mishra, 2008).

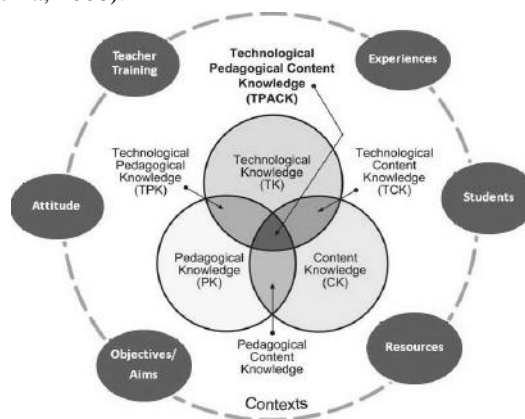


Fig.1: The Mishra and Koehler TPACK Model

At the core of effective teaching with technology are three knowledge bases: content, pedagogy, and technology. These three central areas form the core of technology, pedagogy, and content knowledge (TPACK) framework including the relationship between and among them playing out differently across diverse learning contexts and integration of educational technology (Koehler & Mishra, 2008). This framework builds on Shulman's ideas of PCK to describe how teachers' knowledge (understanding) educational technologies and PCK relate with one another to develop and produce effective classroom instruction with technology. The concept of TPACK has further developed over time and explored in depth in terms of teachers' professional learning. The intricacy of technology integration in the classroom derives from the meaningful connections of knowledge among these three components and the complex ways in which these are developed and utilized in multifaceted and dynamic classroom contexts (Mishra & Koehler, 2007).

Utilizing the Technological Pedagogical Content Knowledge (TPACK) model would surely achieve and enhance learning outcomes in today's generation. This model offers something different yet novel and beneficial to the teaching and learning processes. Technology is a pivotal tool for positive learning experience. At present, TPACK research and development has impacted the practice of teachers, professional development providers, school administrators, and other stakeholders invested in meaningful educational uses of technology. Thus, TPACK deals clear guidelines on how to use and integrate these concepts in the finest ways in classroom instruction. Teacher' technology integration knowledge connects to specific educational practices though exploration of pedagogical reasoning and action (Harris, 2017).

### III. METHODOLOGY

This study employed the Quasi-experimental research design. In this particular study, the researcher used the purposive sampling method where the researcher utilized One-Group Pretest and Posttest Design. It also aimed to investigate and determine the effectiveness of the digitalized materials in teaching creative writing among the Grade 11 HUMSS-Senior High School students of Montessori De Sagrada Familia, Baliwag, Bulacan, Philippines who were taking up Creative Writing class under Humanities and Social Sciences strand. There were 30 students who were taking up Creative Writing as one of the specialized subjects in Academic Track- HUMSS

strand provided they were enrolled during the time of the administration of the questionnaire and experiment Second Semester (2018-2019).

The researcher selected a group of students, administered a pretest (0) on the competencies that they should master at the end of the semester. After pre-testing, the researcher started teaching the content of the digitalized materials (X). The significant mean gained between the pretest and posttest scores of the students were the basis of the researcher's conclusion that the digitalized materials were indeed effective in teaching and developing competencies among the HUMSS-Senior High School students.

After identifying the creative writing skills of the students, proper intervention was done using the digitalized materials which were adapted and packaged for classroom instruction. In this procedure, language experts validated the instructional materials to ensure the appropriateness and effectiveness of the resources based on its content, instructional, and technical qualities.

Likewise, post-test was administered to the student-participants to see if there was a gain difference in using digitalized materials in creative writing from their pre-test scores. The interpretation and the analysis of data were applied to the acquired results from the tests administered to the students, where the final findings of the study were derived from.

### Instruments

In this study, the researcher utilized the existing DepEd rating scale instrument in evaluating non-print resources as validated and authorized by the Learning Resource Management and Development Systems (LRMDS) Office of the Department of Education (DepEd)- Schools Division of Bulacan. A 4-point scale was used to evaluate the effectiveness of the digitalized materials packaged and designed in the creative writing class by fifteen language experts' toward a given subject to produce a force measure where no indifferent option is available (Bertram, 2009).

The researcher utilized the likert scale from DepEd-LRMDS as the primary source of the data that would be used as a technique in gathering information. It was divided into three factors: Content Quality, Instructional Quality, and Technical Quality. Moreover, the test instrument for the pre-test and post-test was based on the statement of the problem and literature and studies related to the research. The two sets of questionnaire were submitted to the content adviser for approval and revision. All suggestions were incorporated in the final draft.

This study utilized writing text and students writing outputs to collect the data specifically to identify their creative writing skills in terms of imagery, figures of speech and diction. The students were assigned to write creative fiction, poetry, and drama manuscripts using digitalized materials. The descriptors were employed to help in scoring the writing skills of the students.

Primarily, the researcher formulated the null hypothesis since the alternative hypothesis is already understood. At this point, the researcher has purposely selected the participants in the study who took part in the processes – HUMSS students using digitalized materials in learning creative writing. The researcher conducted a pre-test to determine the existing strengths and weaknesses of the participants in creative writing skills: imagery, figures of speech and diction.

#### IV. RESULTS AND DISCUSSION

The researcher adapted and packaged the use of digital audio archives, podcasts, songs, powerpoint presentation, songs, movie clips, interactive games, powtoon videos, animated story creator, websites, e-book, story publishing, flipped classroom tool, Edio, Diigo, FlipGrid, VideoAnt, Padlet, blogs, Prezi, social medias (such as Facebook, Twitter, Instagram, Skype etc.), video-creation software (i.e. movie maker, power director, iMovie etc.) and Microsoft Office for classroom instruction in teaching creative writing class among Grade 11 Humanities and Social Sciences students of Montessori De Sagrada Familia.

These digitalized resources were solely used for classroom instruction based on the learning competencies in the specific discipline that were anchored on the Technological Pedagogical Content Knowledge (TPACK) theory. Students' creative writing skills (i.e. diction, figures of speech and imagery) were improved further through the use of digitalized instructional materials. The idea of TPACK brought eminent writing outputs among the Grade 11 HUMSS students in creative writing class.

The digitalized instructional materials are developmentally, pedagogically and culturally appropriate and meaningful to the students' learning set in the Curriculum Guide of the Senior High School- Creative Writing. Imagery, Figures of Speech and Diction are three of the basic creative writing skills that students must hone in the subject area. The bases of technological packaged in creative writing are the students' pretest scores, interests, needs, and the curriculum guide set by the Department of Education. Students were tasked to watch a video clip,

listen to audio archives, manipulate digital resources and play electronic games to sustain their content knowledge and stimulate their unique ideas in writing creatively.

In planning digitalized instructional materials, the researcher considered the learning competencies to be addressed, then anticipated (existing knowledge) what would engage students to learn best and further hone their creative writing skills. The researcher pondered multiple factors in developing technological packaged such as resources, time, knowledge, experiences and other contextual constraints. Learning activities and competencies were reviewed to make a conscious effort in setting higher standards for technology integration.

It was found out that changing writing and learning practices through technology interaction would increase the level of creative writing skills of the students. In modern times, 'learning shifts' moves the students to go beyond simple narration and description about new text forms but consider technology as new platform to process and express ideas for text construction. Interactivity, creativity, and technologies change pedagogic spaces based on learning practice for both teachers and students.

Cope & Kalantzis (2000) revealed the same findings that the rich multiplicity of classroom opportunities will intensify the discovery, exploration and imagination of the students through technical, textual and social dimensions of technologies. It is necessary for the teachers to liberate the creative energy of the today's students in the explicit understanding of creative writing. Changing literacy landscape requires multimodal writing process which enabled recursive movement from planning to presenting, from drafting to designing (Groves, 2012). Developing technological packaged materials in creative writing does not equate for total replacement of teachers nor printed materials but shifting in learning practices that the contemporary world demands.

Table 1. Mean, Standard Deviation and Verbal Interpretation of Expert Validation

Criteria	Mean	Standard Deviation	Verbal Interpretation
Content Quality	3.93	.26	Very Satisfactory
Instructional Quality	3.80	.41	Very Satisfactory
Technical Quality	3.75	.28	Very Satisfactory
Weighted Mean	3.83	.32	Very Satisfactory



**Legend:** 0.00-1.00 = Not Satisfactory

1.01-2.00 = Poor

2.01-3.0 = Satisfactory

3.01-4.00 = Very Satisfactory

Table 1 shows that all the language experts validated the instructional material as very satisfactory in terms of content quality (M=3.93, SD=.26), instructional quality (M=3.80, SD=.41) and technical quality (M=3.75, SD=.28). Overall the experts find the instructional material as very satisfactory (WM=3.83, SD=.32).

Generally speaking, the packaged instructional materials would be an effective tool in improving the creative writings skills of the HUMSS students. Learning activities were varied to sustain students' interest and digital educational technologies were integrated into the learning competencies and teaching approaches. E-learning is an essential element of a connected knowledge society. These packaged instructional materials have the enormous capability to bring people together to share and create knowledge especially in creative writing class. Thus, teachers need to design effective approaches and employ suitable learning resources to maximize students' potentials and interests. The dimensions of digitalized instructional materials in creative writing based on TPACK provide a template that can be of considerable value in designing, facilitating and directing meaningful learning experiences to the HUMSS students.

Table 2. Pretest and Post-test Mean and Standard Deviation in Creative Writing

Criteria	Pretest		Post-test	
	Mean	Standard Deviation	Mean	Standard Deviation
<b>Imagery</b>	15.10	5.44	24.57	4.49
<b>Figures of Speech</b>	14.40	5.41	23.27	4.46
<b>Diction</b>	16.33	5.23	24.40	4.80
<b>Weighted Mean</b>	<b>15.28</b>	<b>5.36</b>	<b>24.08</b>	<b>4.58</b>

Table 2 indicates that the performance of students in the pretest Mean ranges from 14.40 to 16.33 while the post-test Mean ranges from 23.27 to 24.57. The weighted mean shows that pretest performance of students (WM=15.28, SD=5.36) is lower than the post-test (WM=24.08, SD=4.58). Further, the distribution of scores in the posttests of imagery, figures of speech, and diction are more consistent and significant different compared to pretest.

This also reveals that the students performed better in the posttest. The level of creative writing skills of students was in the developing level during the pretest and progressed to proficiency level during the posttest. These findings are supported by the study of Harris & Hofer (2011) which suggested the utilization of digital tools, resources and networks for positive changes in students' learning.

Table 3. Paired Differences in Imagery, Figures of Speech and Diction Based on the Pretest and Post-test Results Using the Packaged Instructional Material

Pairing	95% Confidence Interval of the Difference		T	Df	Significance	Verbal Interpretation	Decision
	Lower	Upper					
Pre-test Imagery - Post-test Imagery	-10.84	-8.09	-14.15	29	.000	There is significant difference.	Reject the null hypothesis
Pre-test Figures of Speech - Post-test Figures of Speech	-10.10	-7.63	-14.68	29	.000	There is significant difference	Reject the null hypothesis
Pre-test Diction - Post-test Diction	-9.33	-6.80	-13.06	29	.000	There is significant difference.	Reject the null hypothesis

Table 3 shows that there is a significant difference in the performance of students in the pretest and post-test in imagery ( $t=-14.15$ ,  $p<.05$ ), figures of speech ( $t=-14.68$ ,  $p<.05$ ) and diction ( $t=-13.06$ ,  $p<.05$ ). There are significant differences in the pre-test and post-test scores of the HUMSS students in terms of imagery, figures of speech, and diction. This result is attributed to the digitalized instructional materials utilized in the creative writing class that had a tremendous impact on the cognitive abilities of the students in improving their writing skills.

Hypothesis Test Summary

Null Hypothesis	Test	Sig.	Decision
1 The median of differences between Pretest Imagery and post Imagery equals 0.	Related-Samples Wilcoxon Signed Rank Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Fig.2: Null Hypothesis Imagery Result

The remarkable findings were the positive effects of packaged digital tools as instrumental in understanding the elements and dynamics of digitalized resources in honing the creative writing skills of the HUMSS students to the intended learning outcomes. Therefore, *the null hypothesis is rejected*.

Hypothesis Test Summary

Null Hypothesis	Test	Sig.	Decision
1 The median of differences between pre_fig2 and post_fig2 equals 0.	Related-Samples Wilcoxon Signed Rank Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Fig.3. Null Hypothesis Figures of Speech Result

In order to see if there was a presence of any difference between the pre-test and post-test scores of the group, the researcher employed Paired T-test or the Dependent T-test. Before evaluating and interpreting, the researcher examined first whether the gathered data could be analyzed through the use of dependent t-test.

There were four factors to be considered before using dependent t-test. The first one states that the dependent variable must be measured on a continuous scale (interval or ratio level). In application to the present study, the test scores were the dependent variables measured through interval level, thus sustaining the first given condition. The second condition for the dependent t-test was that independent variable should be related pairs

which mean the same subjects or groups were present for both the pre-test and the post-test. In the present study, there were two dependent groups received the pre-test and post-test in terms of imagery, figures of speech, and diction were significant outliers in the scores gathered from the pre-test and post-test scores of the group.

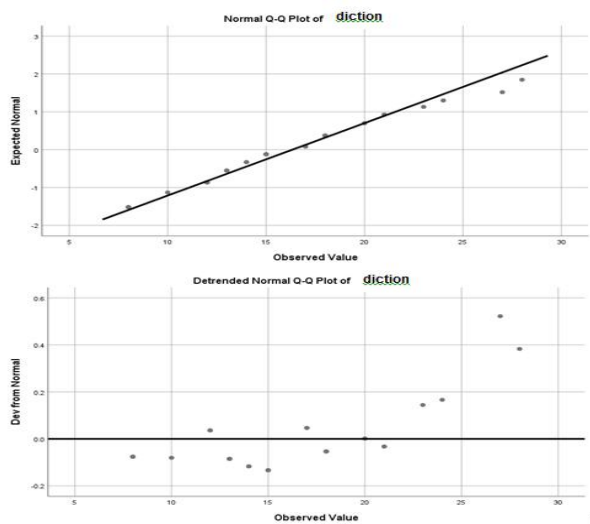


Fig.4: Normal Q-Q Plot Diction Result

Based on the normal Q-Q plot, it could be seen that there were no signs of significant outliers in the differences between the two related groups therefore, the third consideration was met.

Lastly, the fourth requirement was that the dependent variable should be normally distributed. With the aid of the Shapiro-Wilk test of normality, the results showed that the distribution of the differences was normal; hence, the last requirement was satisfied. This statement could be proven true because the p-value of the Shapiro-Wilk test gave a 0.000 value which was lower than the accepted p-value of 0.05.

Table 4. Test of Normality Results based on Kolmogorov-Smirnov and Shapiro-Wilk

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest_imagery	.114	30	.200 <sup>*</sup>	.959	30	.299
post_imagery	.192	30	.006	.906	30	.012
pre_fig	.102	30	.200 <sup>*</sup>	.965	30	.405
post_fig	.143	30	.121	.941	30	.094
figure	.102	30	.200 <sup>*</sup>	.965	30	.405
pre_diction	.108	30	.200 <sup>*</sup>	.966	30	.442
post_diction	.172	30	.023	.906	30	.012
figure2	.108	30	.200 <sup>*</sup>	.966	30	.442

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Through the use of the dependent t-test and the p-value of 0.000 lower than 0.05, it could be said that there was significant difference between the pre-test and post-test scores of the group.

It was clearly evident that the students' writing outputs were greatly improved after utilizing the digitalized instructional materials in creative writing. Students' ideas and knowledge were further stimulated simply because concepts were clearly visualized through the use of five senses (imagery). Descriptive words were crafted as well by making use of proper diction and figures of speech. Thus, there was a connection between the Theory of Technological Pedagogical Content Knowledge (TPACK) and language learning. Students' knowledge, interests and needs were supported through the use of digitalized materials to further hone their creative writing skills.

The researcher matched the nature of the curriculum content to be covered in the creative writing class on how the students' perceived to learn best using educational technologies. Adaption of educational tools and resources could enhance students' creative writing skills and enabled authentic assessment of students' learning. Considering teachers' technology integration knowledge would link specific educational practices through explorations of pedagogical reasoning and action. The development of TPACK provided deeper understanding on the interplay and interdependence among the technological, and content knowledge of digital resources utilized in creative writing class. Educational technologies are best applied to enhance and aid students' learning in different content areas—specifically in creative writing in authentic and learner-centered processes.

The TPACK framework represents an effective approach of thinking and learning that contrasts with the passive model that was all common to the educational enterprise in the 20th century. The digitalized instructional materials offer the possibility of moving beyond the transmission model and emphasis in improving the creative writing skills of the HUMSS students. It is true that technological developments have rapidly shifted the economic and educational landscape through the learning hub for creativity and innovation. The potential of technology is to optimize its connective possibilities, concepts and opportunities for critical and creative discourse.

## V. CONCLUSION

As a result of the thorough evaluation and analysis by the researcher, the following conclusions were

formally drawn:

The findings show that teachers can develop technological packaged materials in creative writing on the bases of students' existing interests, needs, scores and curriculum content as prescribed by the Department of Education. Listening to audio archives, manipulating digital resources and playing electronic games can sustain students' knowledge and interest in writing creatively. Digitalized materials can aid classroom instruction specifically in creative writing class such as songs, videos, pictures, blog, websites, video production tools, simulation, media sharing sites, social media platforms and other electronic resources. Relatively, digitalized materials can contribute to hone further the creative writing skills of HUMSS students.

The packaged materials are pedagogically and developmentally congruent based on its content, instructional and technical aspects. Therefore, the digitalized materials are effective to supplement learning and enhance the creative writing skills of the HUMSS students. Evidently, the use of digitalized materials helps to enhance the creative writing skills of the HUMSS students. This study provides facts and evidences to the public regarding the integration of digitalized instructional strategies and materials in teaching creative writing.

There is a significant difference between the pre-test and post-test results of the participants as shown by improved mean scores of the subjects. Teachers can address the issues on integrating technology in the curriculum by utilizing the TPACK model to ensure the development and progress of the writing skills among the 21st century learners.

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